REMARKS

Reconsideration is requested in view of the above amendments and the following remarks.

Claims 1 and 2 have been revised. The revisions in claims 1 and 2 are supported by, for example, page 4, lines 13-20 and 32-34 in the Specification. Claim 1 has been revised to include all of the features of claim 3. Claims 3, 9, 10, and 12-18 have been canceled without any disclaimer or prejudice. Claim 11 has been revised to depend from claim 2. There is no new matter. Claims 1, 2, 4-8 and 11 are pending.

Drawings

The Office Action Summary page did not confirm that the drawings are accepted. Please see box 10 in the Application Papers section. Applicants respectfully request confirmation that the drawings are accepted in the next Official communication.

Claim Rejections – 35 USC § 103

Claims 1, 2, and 5-11 were rejected under 35 USC 103(a) as being unpatentable over Thomas et al. (US 6291054) in view of Anderson et al. (US 2002/0082524). Applicants do not concede the correctness of the rejection. Claim 1 has been revised to include all of the features of claim 3. Thus, this rejection is moot against claim 1 and its dependent claims 2, 5-8, and 11. Applicants respectfully request that this rejection be withdrawn.

Claims 3 and 4 were rejected under 35 USC 103(a) as being unpatentable over Thomas et al. in view of Anderson et al. and further in view of Mori et al. (US 2002/0172829). Claim 3 has been canceled to track with the revision in claim 1. Applicants respectfully traverse the rejection.

Regarding claim 1, the present record fails to provide any teaching or motivation to combine Thomas et al. and Mori et al. in the manner as required in the rejection to meet the claim. The Office Action conceded that Thomas et al. in view of Anderson et al. does not teach a particulate matter of fluororesin being present in a fluororesin layer (Office Action, page 4, lines 7-8). Accordingly, Thomas et al. in view of Anderson et al. also does not teach an article that is capable of having a fluororesin coating layer and particulate matter of fluororesin that are baked as a single unit.

The rejection stated that Mori et al. teaches a particulate matter of fluororesin. The rejection also stated that the claim is obvious because one having ordinary skill in the art would apply the technique of using a fluororesin particulate for the predictable result of forming surface protrusions in the coating for abrasion resistance. Applicants respectfully traverse.

Even if Mori et al. teaches a particulate matter of fluororesin, which Applicants do not concede, one skilled in the art would not be motivated to replace the large ceramic particles taught in Thomas et al. with fluororesin particles because Thomas et al. teaches away from such a combination.

Thomas et al. teaches that a fluoropolymer material tends to shred from the abrasive forces that result in the removal of the fluoropolymer material (see column 3, lines 6-8). Thomas et al. teaches that a fluoropolymer material containing zero ceramic particles (SiC), exhibits 100% Abrasion (see Sample 1-1 in TABLE 2 and TABLE 2-continued). Further, Thomas et al. teaches that a fluoropolymer material exhibits "intense wear" in an Abrasion Test (see Sample 2-1 in TABLE 6). Thomas et al. teaches that the abrasive forces that cause damage to the fluoropolymer material can only be deflected away by including large particles of ceramic, such that the large particles extend through the thickness of the fluoropolymer material (see column 2, line 67 to column 3, line 12). Thus, Thomas et al. teaches that fluoropolymer material has zero abrasion resistance, such that the material exhibits intense wear. Therefore, Thomas et al. teaches away from particles of fluororesin material in a coating layer. One skilled in the art would not expect that fluororesin particles would be useful in the product of Thomas et al.

Accordingly, one skilled in the art would not expect from the teaching in Thomas et al. that fluororesin particles would exhibit resistance to abrasion. Therefore, one skilled in the art would not be motivated to replace the large ceramic particles taught in Thomas et al. with fluororesin particles because Thomas et al. teaches away from such a combination.

TABLE 2

Abrasion Resistance, Single-Coat

Sample	SiC* (g)	Grade ESK	bake temperature ° C.	dft initial microns
1-1	0		350	24.6
1-2	3.0	P1200	350	26.8
1-3	4.5	P1200	300	38.9
1-4	3.0	P600	350	19.5
1-5	3.0	P600	350	29.2
1-6	3.0	P600	350	36.1
1-7	5.0	P600	350	59.7
1-8	5.0	P600	350	26.8
1-9	5.0	P400	350	31.6

TABLE 2-continued

Abrasion Resistance, Single-Coat

1-10	5.0	P400	350	47.1

Example	dft microns	TABER Delta weight (gr)	Abrasion %**	a/b
1-1	24.6	0.088	100	
1-2	6.0	0.016	22	
1-3	7.0	0.016	18	1.8
1-4	0.7	0.047	4	1.0,1.0
1-5	9.7	0.015	33	
1-6	6.7	0.009	19	1.4, 1.7
1-7	13.3	0.02	22	1.7, 1.5
1-8	11.1	0.028	41	
1-9	19.4	0.072	61	
1-10	8	0.02	17	

*SiC (g) = grams added to 100 grams fluoropolymer composition listed in Table 1 (which has a solids of 25 wt % - formulation see above
**lost film build divided by dft initial x 100

Thomas et al., TABLE 2 and TABLE 2-continued

TABLE 6

Abrasion Resistance, Multi-Coat

Example	Grade Alumina*	Abrasion 400 Cycles (break-through)	Deflection Points/cm	a/b	b/s
2-1	None	Intense wear	None	None	None
2-2	F1200	Medium wear	None	3.5, 5.9	1.8; 1.8
2-3	F500 & F360 (33/66)	Little wear	10	1.3, 1.7, 2.9	2.5; 3.7; 1.5
2-4	F240	None	7	1.5	1.2

*from Universal Abrasives

Thomas et al., TABLE 6

Mori et al. also teaches away from the combination required by the rejection. Mori et al. teaches that "when the mixing ratio of fluorine-containing polymer exceeds 30 wt. %, the adhesion of the coating layer to the material to be coated (or the strength of the coating layer) has a tendency such that it is liable to be decreased. Further, in the coating composition of the embodiment to which the non-adhesion to the body fluid component is to be imparted, the antithrombogenic property thereof has a tendency such that it is liable to be decreased" (paragraph [0074]). Accordingly, even if Mori et al. teaches a coating layer which includes particles of fluorine-containing polymers, which Applicants do not concede, Mori et al. teaches that the particles should be less than 30 wt %.

In contrast, Thomas et al. teaches that "at least 30 wt % of the film hardener is comprised of large ceramic particles" (Abstract, see also claims 1, 2, 11, and 27). Thus, merely substituting fluorine-containing particles in place of the large ceramic particles would lead to a coating layer having at least 30 wt % of fluorine-containing polymer particles. Mori et al. teaches away from such a combination. Thus, one skilled in the art would not be motivated to substitute the large

ceramic particles in a coating layer taught in Thomas et al. with fluorine-containing polymer particles.

Further, Thomas et al. is directed towards an article that deflects abrasion forces (see Abstract). Mori et al. is directed towards preventing adhesion of the body fluid component (see paragraphs [0001] and [0002]). Neither reference is directed towards improving an article by reducing the frictional resistance.

Advantageously, articles according to claim 1 exhibit superior frictional resistances. As stated in the Specification, Example articles according to the claim have less than half the frictional resistance of the Comparative Examples. Examples 1, 2, 3, and 4 have frictional resistances of 2.0 g, 1.8 g, 1.5 g, and 1.8 g, respectively (see page 10, line 12, lines 29-30, page 12, lines 23-24, page 13, lines 6-7 in the Specification). In comparison, the Comparative Examples 1 and 2 have frictional resistances of 4.5 g and 3.8 g, respectively (see page 11, lines 3-5 and 15 to 17 in the Specification). The cited art in the rejection are not directed towards improving an article by reducing the frictional resistance.

Further, claim 1 recites that a fluororesin coating layer and the particulate matter of fluororesin are baked as a single unit. The cited art in the rejection does not teach this feature. Advantageously, a fluororesin coating layer and the fluororesin particles being integrated into a single unit exhibits an advantageous property to those taught in the cited art. For example, being a single unit, the particulate matter of fluororesin would be less likely to separate from coating layer when in use. A separation of the particle from the coating layer would be more likely in a situation where the particle and the coating layer are not a single unit. Neither of the references recognizes the advantages of the single unit feature in claim 1.

For at least the above reasons, claim 1 is patentable over Thomas et al. in view of Anderson et al. and further in view of Mori et al. Claims 2, 4-8 and 11 are patentable for at least the same reasons as claim 1 from which they depend. Applicants respectfully request a favorable reconsideration of the claims.

In view of the above, favorable reconsideration in the form of a notice of allowance is respectfully requested. Any questions regarding this communication can be directed to the undersigned attorney, Douglas P. Mueller, Reg. No. 30,300, at (612) 455-3804.

Respectfully submitted,

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